

# Prepp

## Your Personal Exams Guide



NDA



CDS



SSC CGL



CBSE UGC NET



IAS



SSC CHSL



CTET



MPSC



AFCAT



CSIR UDC NET



IBPS PO



UP POLICE



SSC MTS



SBI PO



BPS



UP TET



IBPS RRB



IBPS CLERK



IES



UPSC CAPF



SSC Stenogr..



RRB NTPC



SSC GD



RBI GRADE B



RBI Assistant



DSSSB

# SSC MTS Previous Year Paper (Held on: 10 Oct 2017 Shift 2)

Total Time: 1 Hour : 30 Minute

Total Marks: 100

## Instructions

| Sl No. | Section Name                     | No. of Question | Maximum Marks | Negative Marks | Positive Marks |
|--------|----------------------------------|-----------------|---------------|----------------|----------------|
| 1      | General English                  | 25              | 25            | 0.25           | 1              |
| 2      | General Intelligence & Reasoning | 25              | 25            | 0.25           | 1              |
| 3      | Numerical Aptitude               | 25              | 25            | 0.25           | 1              |
| 4      | General Awareness                | 25              | 25            | 0.25           | 1              |

- 1.) A total of 90 minutes is allotted for the examination.
- 2.) The server will set your clock for you. In the top right corner of your screen, a countdown timer will display the remaining time for you to complete the exam. Once the timer reaches zero, the examination will end automatically. The paper need not be submitted when your timer reaches zero.
- 3.) There will, however, be sectional timing for this exam. You will have to complete each section within the specified time limit. Before moving on to the next section, you must complete the current one within the time limits.

## General English

1. Directions: In the following question, some parts of the sentence may have errors. Find out which part of the sentence has an error and select the appropriate option. (+1, -0.25)

We look forward to an (1)/successful working relationship (2)/in the future.  
(3)/No Error (4)

- a. 1
- b. 2
- c. 3
- d. 4

- 
2. In the following question, some part of the sentence may have errors. Find out which part of the sentence has an error and select the appropriate option. If a sentence is free from error, select 'No Error'. (+1, -0.25)

Teachers' Day shall be observed (1)/as non-teaching day (2)/in our campus. (3)/No Error (4)

- a. 2
- b. 3
- c. 1
- d. 4

- 
3. In the following question, the sentence given with blank to be filled in with an appropriate word. Select the correct alternative out of the four and indicate it by selecting the appropriate option. (+1, -0.25)

When we got home last night, we found that the guest \_\_\_\_\_.

- a. had arrived
- b. has arriving
- c. is arriving
- d. have arrived

---

4. In the following question, the sentence given with blank to be filled in with an appropriate word. Select the correct alternative out of the four and indicate it by selecting the appropriate option. (+1, -0.25)

Throw a stone \_\_\_\_\_ the fierce cat.

- a. Forward
- b. Above
- c. At
- d. On

---

5. In the following question, out of the given four alternatives, select the one which best expresses the meaning of the given word. (+1, -0.25)

Obligation

- a. Denial
- b. Refusal
- c. Commitment
- d. Declination

6. In the following question, out of the given four alternatives, select the one which best expresses the meaning of the given word. (+1, -0.25)

Notorious

- a. Disreputable
- b. Ethical
- c. Honorable
- d. Glorious

7. In the following question, out of the given four alternatives, select the one which is opposite in meaning of the given word. (+1, -0.25)

Solace

- a. Pity
- b. Disharmony
- c. Relief
- d. Cheer

8. In the following question, out of the given four alternatives, select the one which is opposite in meaning of the given word. (+1, -0.25)

Gather

- a. Choose
- b. Unite

- c. Crowd
  - d. Divide
- 

9. In the following question, out of the given four alternatives, select the one which is opposite in meaning of the given word. (+1, -0.25)

Induce

- a. Convince
  - b. Activate
  - c. Impel
  - d. Prevent
- 

10. In the following question, out of the four given alternatives, select the alternative which best expresses the meaning of the Idiom/Phrase. (+1, -0.25)

A burning question

- a. A lengthy question
  - b. An important question
  - c. A useless question
  - d. An easy question
- 

11. In the following question, out of the four given alternatives, select the alternative which best expresses the meaning of the Idiom/Phrase. (+1, -0.25)

By hook or by crook

- a. Causing trouble to
  - b. By any possible means
  - c. To fight against
  - d. To bear patiently
- 

12. Improve the bracketed part of the sentence. (+1, -0.25)

Last month (he makes news with his) "go whistle" comment to the leaders over outstanding dues.

- a. he will make news with him
  - b. he made news with his
  - c. he makes news with him
  - d. No improvement
- 

13. Improve the bracketed part of the sentence. (+1, -0.25)

The terms of a future partnership would be vastly (inferior on) the benefits of full membership.

- a. inferior by
  - b. inferior to
  - c. inferior in
  - d. No improvement
-

14. Directions: In the following question, out of the four given alternatives, select the alternative which is the best substitute of the phrase. (+1, -0.25)

A woman who entertains guests.

- a. Nurse
- b. Waiter
- c. Hostess
- d. Maid

15. In the following question, out of the four given alternatives, select the alternative which is the best substitute of the phrase. (+1, -0.25)

A reminder of something

- a. Information
- b. Letter
- c. Brochure
- d. Memento

16. In the following question, a word has been written in four different ways out of which only one is correctly spelt. Select the correctly spelt word. (+1, -0.25)

- a. Sponsor
- b. Esponser
- c. Sponser



d. Sponcer

---

17. In the following question, a word has been written in four different ways out of which only one is correctly spelt. Select the correctly spelt word. (+1, -0.25)

- a. Satelite
  - b. Sattelite
  - c. Satellite
  - d. Sattellite
- 

18. Rearrange the parts of the sentence in correct order. (+1, -0.25)

A country cannot

P:development of its citizens

Q:the individual growth and

R:grow and develop without

- a. PRQ
  - b. QRP
  - c. PQR
  - d. RQP
- 

19. Rearrange the parts of the sentence in correct order. (+1, -0.25)

Everyone should

P:the same opportunities

Q:command the same

R:respect and enjoy

a. RQP

b. QRP

c. PQR

d. QPR

---

20. In the following question, out of the four given alternatives, select the alternative which best expresses the meaning of the Idiom/Phrase. (+1, -0.25)

By hook or by crook

a. Causing trouble to

b. By all means

c. To fight against

d. To bear patiently

---

21. In the following passage some of the words have been left out. Read the passage carefully and select the correct answer for the given blank out of the four alternatives. (+1, -0.25)

One of the major problems of India is unemployment. Unemployment means the state of being without \_\_\_\_\_ opportunity of earning one's livelihood. In the good,old, golden days when the population of the world was \_\_\_\_\_, there was hardly a person who was not employed in some way or other to earn a \_\_\_\_\_. But this situation no longer exists. In

those days most people lived in the rural areas and depended on agriculture and cottage industries. But industrial \_\_\_\_\_ brought about a change in the situation. It introduced machines, and as a single machine can do the work of many men, it naturally threw many persons out of employment. No doubt, this industrial civilization has greatly \_\_\_\_\_ the wants of and opened up many new opportunities for employment.

the state of being without \_\_\_\_\_ opportunity

- a. Any
- b. Every
- c. Either
- d. Neither

---

22. In the following passage some of the words have been left out. Read the passage carefully and select the correct answer for the given blank out of the four alternatives. (+1, -0.25)

One of the major problems of India is unemployment. Unemployment means the state of being without \_\_\_\_\_ opportunity of earning one's livelihood. In the good, old, golden days when the population of the world was \_\_\_\_\_, there was hardly a person who was not employed in some way or other to earn a \_\_\_\_\_. But this situation no longer exists. In those days most people lived in the rural areas and depended on agriculture and cottage industries. But industrial \_\_\_\_\_ brought about a change in the situation. It introduced machines, and as a single machine can do the work of many men, it naturally threw many persons out of employment. No doubt, this industrial civilization has greatly \_\_\_\_\_ the wants of and opened up many new opportunities for employment.

population of the world was \_\_\_\_\_,

- a. Popular
- b. Smaller
- c. Larger
- d. Significant

23. In the following passage some of the words have been left out. Read the passage carefully and select the correct answer for the given blank out of the four alternatives. (+1, -0.25)

One of the major problems of India is unemployment. Unemployment means the state of being without \_\_\_\_\_ opportunity of earning one's livelihood. In the good,old, golden days when the population of the world was \_\_\_\_\_, there was hardly a person who was not employed in some way or other to earn a \_\_\_\_\_. But this situation no longer exists. In those days most people lived in the rural areas and depended on agriculture and cottage industries. But industrial \_\_\_\_\_ brought about a change in the situation. It introduced machines, and as a single machine can do the work of many men, it naturally threw many persons out of employment. No doubt, this industrial civilization has greatly \_\_\_\_\_ the wants of and opened up many new opportunities for employment.

some way or other to earn a \_\_\_\_\_.

- a. Giving
- b. Linking
- c. Living
- d. Searching

24. In the following passage some of the words have been left out. Read the passage carefully and select the correct answer for the given blank out of the four alternatives. (+1, -0.25)

One of the major problems of India is unemployment. Unemployment means the state of being without \_\_\_\_\_ opportunity of earning one's livelihood. In the good,old, golden days when the population of the world was \_\_\_\_\_, there was hardly a person who was not employed in some way or other to earn a \_\_\_\_\_. But this situation no longer exists. In those days most people lived in the rural areas and depended on agriculture and cottage industries. But industrial \_\_\_\_\_ brought about a change in the situation. It introduced machines, and as a single machine can do the work of many men, it naturally threw many persons out of employment. No doubt, this industrial civilization has greatly \_\_\_\_\_ the wants of and opened up many new opportunities for employment.

But industrial \_\_\_\_\_ brought about a change

- a. Change
- b. Backwardness
- c. Barbarism
- d. Revolution

25. In the following passage some of the words have been left out. Read the passage carefully and select the correct answer for the given blank out of the four alternatives. (+1, -0.25)

One of the major problems of India is unemployment. Unemployment means the state of being without \_\_\_\_\_ opportunity of earning one's livelihood. In the good,old, golden days when the population of the world was \_\_\_\_\_, there was hardly a person who was not employed in

some way or other to earn a \_\_\_\_\_. But this situation no longer exists. In those days most people lived in the rural areas and depended on agriculture and cottage industries. But industrial \_\_\_\_\_ brought about a change in the situation. It introduced machines, and as a single machine can do the work of many men, it naturally threw many persons out of employment. No doubt, this industrial civilization has greatly \_\_\_\_\_ the wants of and opened up many new opportunities for employment.

greatly \_\_\_\_\_ the wants of and opened

- a. Increased
- b. Balanced
- c. Decreased
- d. Sustained



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## General Intelligence & Reasoning

26. In the following question, select the number which can be placed at the sign of question mark (?) from the given alternatives. (+1, -0.25)

|   |   |
|---|---|
| 1 | 2 |
| 3 | 4 |

|   |   |
|---|---|
| 2 | 6 |
| 1 | 2 |

|   |   |
|---|---|
| 2 | 2 |
| 1 | ? |

- a. 1
- b. 3
- c. 5
- d. 6

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27. How many quadrilaterals are there in the given figure? (+1, -0.25)



- a. 9
- b. 11

c. 13

d. 15

28. A word is represented by only one set of numbers as given in any one of the alternatives. The sets of numbers given in the alternatives are represented by two classes of alphabets as shown in the given two matrices. The columns and rows of Matrix-I are numbered from 0 to 4 and that of Matrix-II are numbered from 5 to 9. A letter from these matrices can be represented by 30, 75, etc., and 'E' can be represented by 32, 69, etc. Similarly, you have to identify the set for the word "PHONE". (+1, -0.25)

| Matrix - I |   |   |   |   |   | Matrix - II |   |   |   |   |   |
|------------|---|---|---|---|---|-------------|---|---|---|---|---|
|            | 0 | 1 | 2 | 3 | 4 |             | 5 | 6 | 7 | 8 | 9 |
| 0          | U | V | F | C | D | 5           | S | N | L | A | H |
| 1          | L | Y | K | E | J | 6           | U | O | Z | Y | E |
| 2          | X | P | V | M | K | 7           | B | X | D | C | P |
| 3          | B | R | E | U | H | 8           | X | H | D | M | T |
| 4          | A | L | D | X | N | 9           | V | F | A | X | O |

a. 21, 86, 98, 57, 32



- b. 79, 34, 99, 56, 13
- c. 21, 59, 66, 42, 68
- d. 79, 87, 66, 44, 10

29. From the given answer figures, select the one in which the question figure is hidden/embedded. (+1, -0.25)



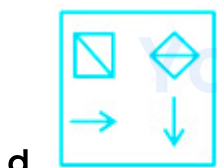
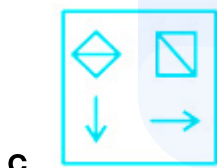
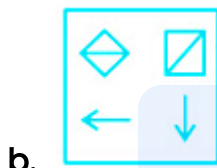
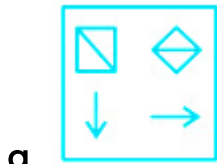
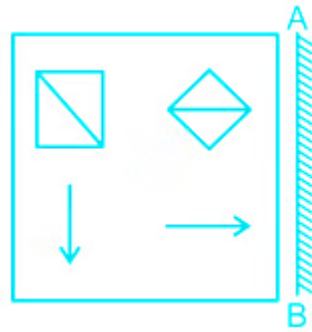
30. Which answer figure will complete the pattern in the question figure?

(+1, -0.25)



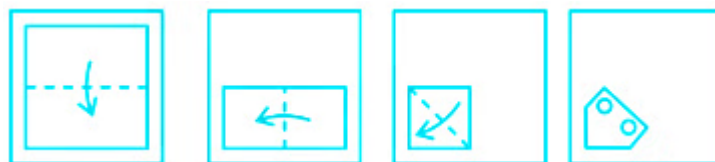
31. If a mirror is placed on the line AB, then which of the answer figure is the right image of the given figure?

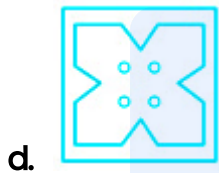
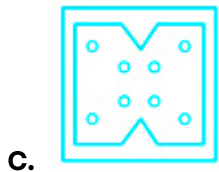
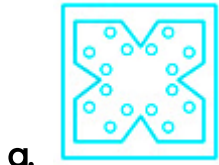
(+1, -0.25)



32. A piece of paper is folded and punched as shown below in the question figures. From the given answer figures, indicate how it will appear when opened?

(+1, -0.25)





33. By interchanging which two digits the equation will be correct? (+1, -0.25)

$$47 \times 3 \div 2 + 15 = 33$$

- a. 5 and 4
- b. 7 and 5
- c. 7 and 2
- d. 3 and 4

34. If  $4 * 7 * 6 = 698$  and  $3 * 5 * 0 = 572$ , then  $6 * 2 * 1 = ?$  (+1, -0.25)

- a. 438

b. 938

c. 583

d. 843

---

35. Arrange the given words in the sequence in which key occur in the dictionary. (+1, -0.25)

1. Onion

2. Onset

3. Oxide

4. Overt

5. Opera

a. 12543

b. 13543

c. 21345

d. 12345

---

36. In the following question, select the missing number from the given series. (+1, -0.25)

67, 64, 59, 52, ?

a. 43

b. 47

c. 49

d. 45

---

37. A series is given with one term missing. Select the correct alternative from the given ones that will complete the series. (+1, -0.25)

CD, FG, IJ, LM, ?

a. OP

b. PQ

c. PO

d. QR

---

38. In the following question, select the odd word from the given alternatives. (+1, -0.25)

a. Lungs

b. Nose

c. Air pipe

d. Liver

---

39. In the following question, select the odd number pair from the given alternatives. (+1, -0.25)

a. 11 – 1331

b. 4 – 64

c. 5 – 25

---

d. 7 – 343

40. In the following question, select the odd letters from the given alternatives. (+1, -0.25)

a. WVX

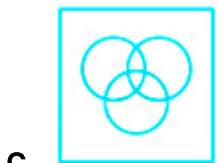
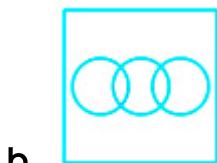
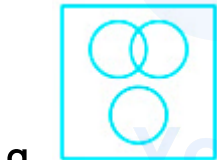
b. QPR

c. KJL

d. GFI

41. Identify the diagram that best represents the relationship among the given classes. (+1, -0.25)

Actor, Director, Male



c.



d.

---

42. In the following question, select the related word from the given alternatives. (+1, -0.25)

Wine : Brewery :: Coin : ?

- a. Locker
- b. Wallet
- c. Mint
- d. Safe

---

43. In the following question, select the related number from the given alternatives. (+1, -0.25)

4 : 64 :: 6 : ?

- a. 216
- b. 36
- c. 98
- d. 156

---

44. In the following question, select the related letters from the given alternatives. (+1, -0.25)



BD : EH :: PX : ?

- a. RA
  - b. SB
  - c. RB
  - d. SA
- 

45. In the following question, select the word which cannot be formed using the letters of the given word. (+1, -0.25)

TRANSFORMED

- a. ROSE
  - b. TRADE
  - c. STRAP
  - d. SAND
- 

46. If North-East is called East, North is called North-East and North-West is called North, then what will South be called as? (+1, -0.25)

- a. West
  - b. South-West
  - c. North-West
  - d. East
-

47. P is taller than Q. Q is shorter than R. S is taller than P but shorter than R. ( +1, -0.25)  
Who is the shortest?

- a. Q
- b. P
- c. S
- d. R

48. In the following question below are given some statements followed by some conclusions. Taking the given statements to be true even if they seem to be at variance from commonly known facts, read all the conclusions and then decide which of the given conclusion logically follows the given statements. ( +1, -0.25)

**Statements:**

- I. Some blue are yellow.
- II. Some yellow are green.

**Conclusions:**

- I. Some blue are green.
  - II. Some blue are not green.
- a. Only conclusion (I) follows.
  - b. Only conclusion (II) follows.
  - c. Either conclusion (I) or (II) follows
  - d. Neither conclusion (I) nor conclusion (II) follows.

49. In a certain code language, "GOT" is written as "HQW". How is "HEN" written in that code language? (+1, -0.25)

- a. IGQ
- b. GGQ
- c. IFQ
- d. IGO

50. In a certain code language, "SUN" is written as "55" and "RAT" is written as "40". How is "GUN" written in that code language? (+1, -0.25)

- a. 41
- b. 42
- c. 43
- d. 47



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## Numerical Aptitude

51. The sum of two numbers is 7 and their product is 12. What is the sum of their reciprocals? (+1, -0.25)
- a.  $7/12$
  - b.  $8/15$
  - c.  $7/13$
  - d.  $12/7$
- 

52. How many multiples of 5 are there from 1 to 200 which are not multiples of 4? (+1, -0.25)
- a. 40
  - b. 30
  - c. 25
  - d. 35
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- 

53. What is the value of  $\sqrt{18 - 2\sqrt{77}}$ ? (+1, -0.25)
- a.  $\sqrt{11} + \sqrt{7}$
  - b.  $\sqrt{13} - \sqrt{4}$
  - c.  $\sqrt{11} - \sqrt{7}$
  - d.  $\sqrt{13} + \sqrt{4}$
-

54. How many factors of 420 are prime numbers? (+1, -0.25)

- a. 3
- b. 15
- c. 7
- d. 4

55. Which of the following number is divisible by 9? (+1, -0.25)

- a. 234561
- b. 444123
- c. 555231
- d. 65422

56. What is the value of  $[(0.4)^3 + (0.6)^3] / [(0.4)^2 + (0.6)^2 - (0.4) \times (0.6)]$ ? (+1, -0.25)

- a. 1.2
- b. 1.1
- c. 1.0
- d. 0.9

57. A and B together can do a piece of work in 20 days and A alone can do it in 30 days. B alone can do the work in how many days? (+1, -0.25)

- a. 45
  - b. 60
  - c. 75
  - d. 90
- 

58. If  $\frac{2}{5}$ <sup>th</sup> of a cistern is filled in 6 minute, then what is the time needed to fill the remaining part? (+1, -0.25)

- a. 8
  - b. 9
  - c. 12
  - d. 10
- 

59. The length and breadth of a rectangular field are in the ratio of 6 : 5. If the perimeter of the field is 132 metres, then what is its breadth? (+1, -0.25)

- a. 24 m
  - b. 30 m
  - c. 35 m
  - d. 36 m
- 

60. A trader allows two successive discounts of 30% and 40% on selling an article. If he sells that article for Rs. 840, then what is the marked price (in Rs.) of the article? (+1, -0.25)

- a. 2000
- b. 1900
- c. 1800
- d. 1700

---

61. The marked price of an article is Rs. 1050. A shopkeeper gives a discount of 30% and still makes a profit of 40%. What is the cost price (in Rs.) of the article? (+1, -0.25)

- a. 495
- b. 475
- c. 500
- d. 525

---

62. If  $\frac{2}{3}$  of P =  $\frac{6}{7}$  of Q, then what is P : Q? (+1, -0.25)

- a. 9 : 7
- b. 9 : 5
- c. 7 : 5
- d. 5 : 7

---

63. If  $\frac{x}{y} = \frac{3}{5}$ , then what is the ratio of  $(5x + 2y)$  and  $(5x - y)$ ? (+1, -0.25)

- a. 5 : 2

- b. 5 : 3
  - c. 5 : 8
  - d. 3 : 8
- 

64. The mean of 15 numbers is 40. If two numbers 45 and 35 are removed, then what will be the mean of remaining numbers? (+1, -0.25)

- a. 37.5
  - b. 40
  - c. 42.5
  - d. 38
- 

65. If chairs are bought at Rs. 1200 each and sold at Rs. 1500 each, then what will be the profit percentage? (+1, -0.25)

- a. 10
  - b. 15
  - c. 20
  - d. 25
- 

66. If the ratio of the cost price and selling price of an article is 4: 5, then what will be the profit percentage? (+1, -0.25)

- a. 25
- b. 35



c. 40

d. 50

---

67. In a school 55% of the students are girls. If number of boys is 360, then what is the total number of students in the school? (+1, -0.25)

a. 720

b. 800

c. 1000

d. 1200

---

68. If the price of a commodity is decreased by 40% and its consumption is increased by 30%, then what will be the percentage increase or decrease in the expenditure of the commodity? (+1, -0.25)

a. 22% decrease

b. 22% increase

c. 12% increase

d. 12% decrease

---

69. Speed of a boat along the current and against the current is 16 km/hr and 10 km/hr respectively. What is the speed of the current? (+1, -0.25)

a. 2 km/hr

b. 3 km/hr

- c. 4 km/hr
  - d. 1 km/hr
- 

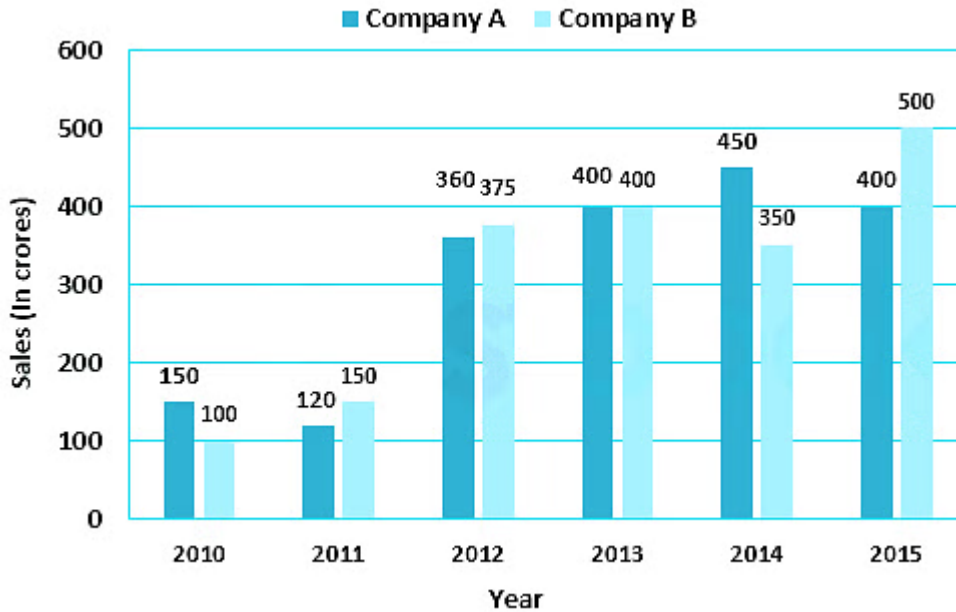
70. If 200 meters long train takes 40 seconds to cross a pole, then what is the speed (in km/h) of the train? (+1, -0.25)

- a. 9 km/h
  - b. 18 km/h
  - c. 36 km/h
  - d. 45 km/h
- 

71. A sum was invested on simple interest at a certain rate for 5 years. If the interest rate is increased by 2%, then the interest increases by Rs. 190. What is the sum (in Rs) invested? (+1, -0.25)

- a. 1300
  - b. 1600
  - c. 1900
  - d. 2200
- 

72. **Direction:** The bar chart given below shows the sales (in crores) of 2 companies A and B from years 2010 to 2015 (+1, -0.25)



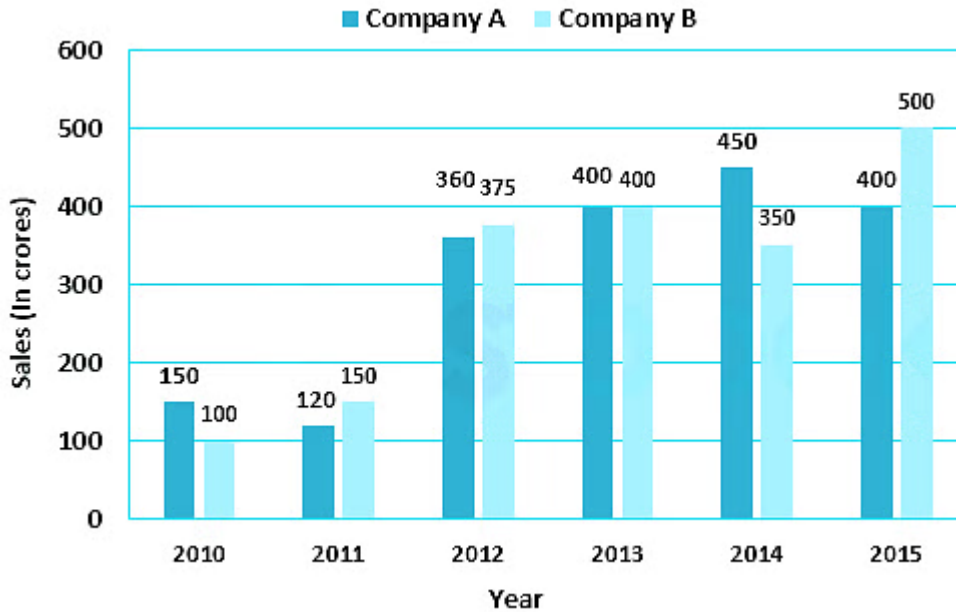
What is the average sale (in crores) of company A from years 2010 to 2015?

- a. 315
- b. 313.27
- c. 350
- d. 313.33

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73. **Direction:** The bar chart given below shows the sales (in crores) of 2 companies A and B from years 2010 to 2015

(+1, -0.25)



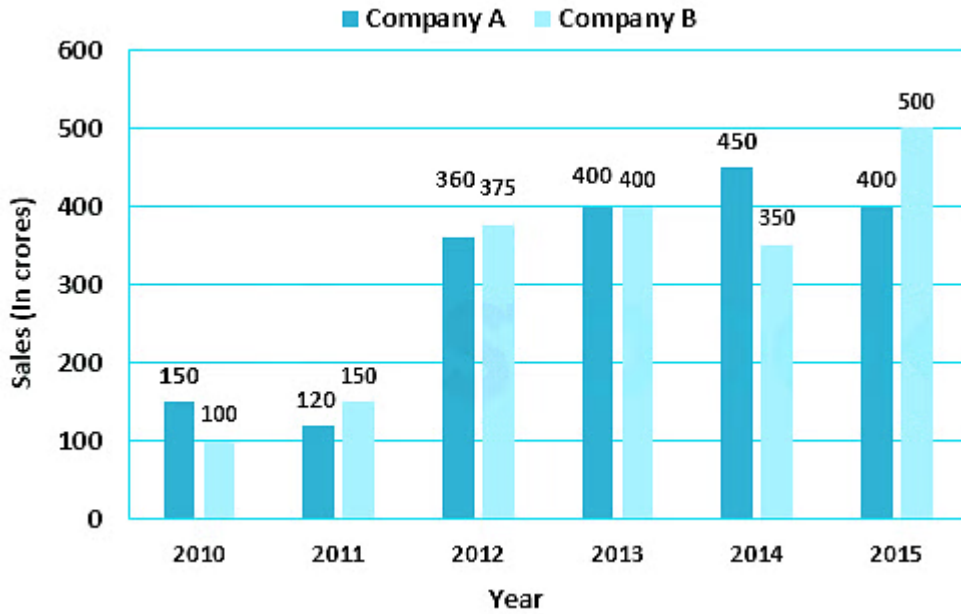
For how many years was the sale of company A is greater than that of company B?

- a. 1
- b. 2
- c. 3
- d. 4

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74. **Direction:** The bar chart given below shows the sales (in crores) of 2 companies A and B from years 2010 to 2015

(+1, -0.25)



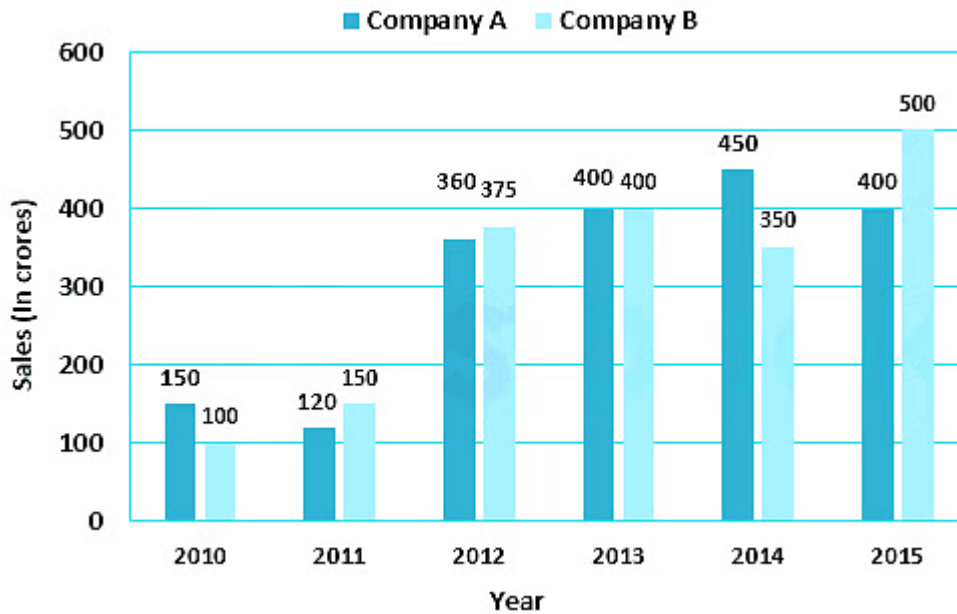
What is the percentage change in the sale of company B from year 2011 to 2012?

- a. 100
- b. 225
- c. 150
- d. 125

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75. **Direction:** The bar chart given below shows the sales (in crores) of 2 companies A and B from years 2010 to 2015

(+1, -0.25)



What is the difference (in crores) between the sale of company A in 2012 and company B in 2015?

- a. 15
- b. 150
- c. 40
- d. 140

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## General Awareness

76. Per-capita income is also called \_\_\_\_\_ . (+1, -0.25)
- a. Gross National Product
  - b. Gross Domestic Product
  - c. Average income
  - d. Total income
- 
77. What is a paper instructing the bank to pay a specific amount from one person's account to another person's account called? (+1, -0.25)
- a. Lease
  - b. Order
  - c. Cheque
  - d. Transfer
- 
78. Which schedule of the Indian constitution deals with languages recognized by constitution? (+1, -0.25)
- a. First Schedule
  - b. Second Schedule
  - c. Eight Schedule
  - d. Tenth Schedule
-

79. A \_\_\_\_\_ government rules within limits set by constitutional law and citizens rights. (+1, -0.25)

- a. Monarchic
- b. Autocratic
- c. Aristocratic
- d. Democratic

80. Who devised the Mahalwari Settlement? (+1, -0.25)

- a. Holt Mackenzie
- b. Lord Dalhousie
- c. Edmund Burke
- d. Warren Hastings

81. Match the following (+1, -0.25)

**Term Definition**

- a. Sadar    1. Military Commanders
- b. Faujdars    2. Town Police Commanders
- c. Kotwal    3. Minister in charge of religious and charitable patronage

- a. A-1, B-2, C-3
- b. A-1, B-3, C-2
- c. A-3, B-1, C-2



d. A-2, B-1, C-3

---

82. What does the 66½ degrees south latitude mark? (+1, -0.25)

- a. Tropic of Cancer
  - b. Tropic of Capricorn
  - c. Arctic circle
  - d. Antarctic circle
- 

83. What is the thickness of the crust on the continental masses (in km)? (+1, -0.25)

- a. 5
  - b. 15
  - c. 25
  - d. 35
- 

84. What are the changes in our surrounding that makes us respond to them called? (+1, -0.25)

- a. Respiration
  - b. Excretion
  - c. Stimuli
  - d. Reproduction
-

85. The original function of the vertebrate stomach was\_\_\_\_\_ . (+1, -0.25)

- a. Storage
  - b. Digestion
  - c. Bile juice secretion
  - d. Mixing of food
- 

86. A deficiency of vitamin A results in \_\_\_\_\_ . (+1, -0.25)

- a. Pellagra
  - b. Rickets
  - c. Xerophthalmia
  - d. Scurvy
- 

87. What is the time taken by the pendulum to complete one oscillation called? (+1, -0.25)

- a. Time period
  - b. Frequency
  - c. Amplitude
  - d. Vibration
- 

88. What happens when an electric current is passed through a wire? (+1, -0.25)

- a. The wire gets cool
  - b. The wire gets hot
  - c. The wire gets cool first and then gets hot
  - d. No change occurs
- 

89. The discarded file in the Recycle bin gets removed permanently when (+1, -0.25)

-----.

- a. the computer is shut down
  - b. it is emptied manually
  - c. the user is switched
  - d. data changes
- 

90. A metal sulphate has the formula  $MSO_4$ . A chloride of the same metal will (+1, -0.25)  
have the formula -----.

- a.  $M_2Cl_3$
  - b.  $M_2Cl$
  - c.  $MCl_2$
  - d.  $M_3Cl_3$
- 

91. The general name of the elements of "Group 17" is ----- (+1, -0.25)

- a. Metals

- b. Halogens
  - c. Transition elements
  - d. Noble gases
- 

92. Which among the following is NOT classified under consumers? (+1, -0.25)

- a. Herbivores
  - b. Carnivores
  - c. Omnivores
  - d. Autotrophs
- 

93. Rashtriya Uchchatar Siksha Abhiyan (RUSA) was approved for reforming the state \_\_\_\_\_ education system. (+1, -0.25)

- a. Primary
  - b. Lower
  - c. Higher
  - d. Middle
- 

94. Who built the first laser? (+1, -0.25)

- a. Theodore H. Maiman
- b. Henry Great Head
- c. Benjamin Franklin

d. Issac Newton

---

95. The Mahayana text belongs to which religion? (+1, -0.25)

- a. Jainism
  - b. Sikhism
  - c. Buddhism
  - d. None of these
- 

96. Which company has received Prime Minister's trophy for ' Best Performing Integrated Steel Plant' for the performance years 2014-15 and 2015-16? (+1, -0.25)

- a. Gallant Steel Limited
  - b. Tata Steel Limited
  - c. Bharat Steel Limited
  - d. Ambuja Steel Limited
- 

97. Who is the author of the book named "My Experiment with Truth"? (+1, -0.25)

- a. Harbans Singh
  - b. Satyajit Ray
  - c. Atal Bihari Vajpayee
  - d. M. K. Gandhi
-

98. Missile Technology Control Regime (MTCR) was established in 1987 by \_\_\_\_\_ countries. (+1, -0.25)
- a. G-20
  - b. G-4
  - c. NAM
  - d. G-7
- 

99. The Indo-Lanka Economic and Technological cooperation Agreement is a \_\_\_\_\_ agreement. (+1, -0.25)
- a. Trade
  - b. Cultural
  - c. Educational
  - d. Information technology
- 

100. Who was the first Indian (Independent India) to play for any international football club? (+1, -0.25)
- a. Michael Chopra
  - b. Sunil Jhingan
  - c. Bhaichung Bhutia
  - d. Sandesh Jhingan
-

## Answers

### 1. Answer: a

#### Explanation:

The correct answer is '1' i.e. error lies in the first part of the sentence.

#### ★ Key Points

In part 1 of the sentence, the usage of 'an' is incorrect. Instead, use 'a'

- The article 'an' is used before words that begin with vowels. In the given sentence, 'successful' starts with the consonant sound hence we need to use 'a' before this word.
- Let's see an example-
  - He is a good man. (good starts with the consonant sound hence the usage of article a is correct.)

So the correct sentence is- *We look forward to **a successful** working relationship in the future.*

### 2. Answer: a

#### Explanation:

The correct answer is '2' i.e. error lies in part 2 of the sentence.

#### ★ Key Points

In part 2 of the sentence, the usage of 'non-teaching day' is incorrect. Instead, use 'a non-teaching day'

- The article 'a' is missing before the word 'non-teaching.' The article 'a' would denote that it is one day.

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- The word 'non-teaching' is an adjective and this adjective is used attributively the structure for this is 'a/an/the + adjective + noun' so that's why we need to use an indefinite article before the adjective.

**So the correct sentence is-** *Teachers' day shall be observed as **a non-teaching day** in our campus.*

---

**3. Answer: a**

**Explanation:**

The correct tense here is past perfect to denote that an activity had already taken place. Thus option 1 fits here.

---

**4. Answer: c**

**Explanation:**

The correct preposition here is 'at' as things are thrown at someone.

---

**5. Answer: c**

**Explanation:**

The meanings of the words are:

Obligation=> an act or course of action to which a person is morally or legally bound; a duty or commitment

Denial=> contradiction

Refusal=> an act of refusing to do something

---



Commitment=> dedication

Declination=> the angular distance of a point north or south of the celestial equator

Thus option 3 is the correct answer.

---

## 6. Answer: a

### Explanation:

The meanings of the words are:

Notorious=> famous or well known, typically for some bad quality or deed

Disreputable=> not considered to be respectable in character or appearance

Ethical=> relating to moral principles or the branch of knowledge dealing with these

Honorable=> bringing or deserving honour

Glorious=> having, worthy of, or bringing fame or admiration

Thus option 1 is the correct answer.

---

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---

## 7. Answer: b

### Explanation:

The meanings of the words are:

Solace=> peace

Pity=> the feeling of sorrow and compassion caused by the sufferings and misfortunes of others

Disharmony=> lack of harmony or agreement

Thus option 2 is the correct answer.

---

8. Answer: d

**Explanation:**

The correct answer is **Option 4**.

- **Gather:** assemble, come together, assemble
- **Choose:** select, pick, opt
- **Unite:** join, connect, combine
- **Crowd:** horde, mob
- **Divide:** split, cut, separate

Divide is opposite of Gather.

---

9. Answer: d

**Explanation:**

The meanings of the words are:

Induce=> succeed in persuading or leading (someone) to do something

Convince=> cause (someone) to believe firmly in the truth of something

Activate=> make (something) active or operative

Impel=> drive, force, or urge (someone) to do something

Thus option 4 is the correct answer.

---

10. Answer: b

**Explanation:**

The idiom 'a burning question' means 'an important question.' Thus option 2 is the correct answer.

---

**11. Answer: b**

**Explanation:**

The *idiom 'by hook or by crook' means 'by any possible means.'*

Thus **option 2 is the correct answer.**

---

**12. Answer: b**

**Explanation:**

The correct tense here is simple past as the sentence is structured in simple past tense. It talks about an activity that took place last month. Thus option 2 is the correct answer.

---

**13. Answer: b**

**Explanation:**

The correct preposition that fits here is 'to' as something is inferior 'to' something. Thus option 2 is the correct answer.

---

**14. Answer: c**

**Explanation:**

The correct answer is **Option 3** i.e. 'Hostess'



Explanation:

- The meanings of the words are:
  - **Nurse**=> a person trained to care for the sick or infirm, especially in a hospital
  - **Waiter**=> a man whose job is to serve customers at their tables in a restaurant
  - **Hostess**=> a woman who receives or entertains guests
  - **Maid**=> a female domestic servant

*Thus option 3 is the correct answer.*

---

**15. Answer: d**

**Explanation:**

The meanings of the words are:

Brochure=> a small book or magazine containing pictures and information about a product or service

Memento=> an object kept as a reminder of a person or event

Thus option 4 is the correct answer.

---

**16. Answer: a**

**Explanation:**

The correct word is 'sponsor' which means 'a person or organization that pays for or contributes to the costs involved in staging a sporting or artistic event in return for advertising.' Thus option 1 is the correct answer.

---

**17. Answer: c****Explanation:**

The correct word is 'satellite' which means 'an artificial body placed in orbit round the earth or another planet in order to collect information or for communication.' Thus option 3 is the correct answer.

---

**18. Answer: d****Explanation:**

R is the first statement as it mentions what a country cannot be. Since Q has 'and' mentioned in it, it has to be the second statement. P completes the sentence. Thus option 4 is the correct answer.

---

**19. Answer: b****Explanation:**

Q is the first statement as it has the verb 'command' mentioned. R follows Q as it states what should be commanded in the same way. P completes the sentence by mentioning what should be enjoyed. Thus option 2 is the correct answer.

---

20. Answer: b

**Explanation:**

The idiom 'by hook or by crook' means 'by all means.' Thus option 2 is the correct answer.

---

21. Answer: a

**Explanation:**

The correct word that fits here is 'any' as it means 'no opportunity' here. The other words do not fit here grammatically.

---

22. Answer: b

**Explanation:**

The sentence denotes that the number of people was less so everyone had a job. Thus option 2 is the correct answer. The other words do not convey a proper meaning.

---

23. Answer: c

**Explanation:**

The correct word here is 'living' as the phrase is 'earn a living.' It means 'to **earn** enough money to pay for everything you need.' Thus option 3 is the correct answer.

---

**24. Answer: d**

**Explanation:**

The word 'revolution' is the correct one here as it means 'advancement.' The word 'change' is less apt than option 4. The word 'backwardness' is incorrect. The word 'barbarism' too does not fit here as it means 'absence of culture and civilization.'

---

**25. Answer: a**

**Explanation:**

Any kind of progress increases the wants thus option 1 is the correct answer. The word 'balanced' does not fit here. The word 'sustained' means 'continuing for an extended period or without interruption' and does not convey the correct meaning.

---

**26. Answer: d**

**Explanation:**

Logic: Multiplication of all 4 digit of matrix = 24

In the first matrix:

$$\rightarrow 1 \times 2 \times 3 \times 4 = 24$$

In the 2<sup>nd</sup> matrix:

$$\rightarrow 2 \times 6 \times 1 \times 2 = 24$$

In the 3<sup>rd</sup> matrix:

$$\rightarrow 2 \times 2 \times 1 \times ? = 24$$

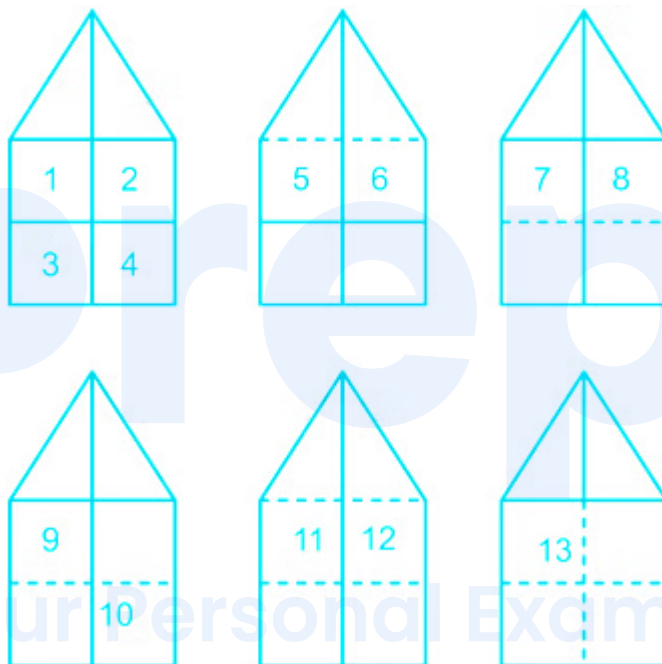
$$\rightarrow ? = 24/4 = 6$$

Hence, "6" is correct answer.

**27. Answer: c**

**Explanation:**

Below diagram represent quadrilateral in the given question figure,



There are total 13 quadrilaterals the given question figure.

**28. Answer: b**

**Explanation:**

- 1) 21, 86, 98, 57, 32 → P, H, X, L, E
- 2) 79, 34, 99, 56, 13 → P, H, O, N, E
- 3) 21, 59, 66, 42, 68 → P, H, O, D, Y

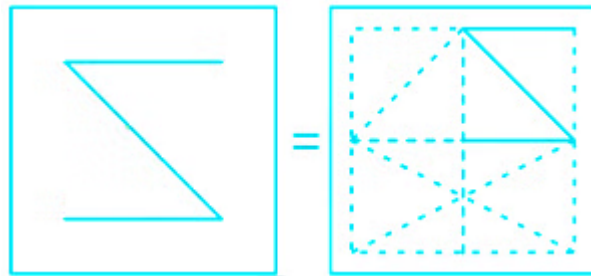


4) 79, 87, 66, 44, 10 → P, D, O, N, L

Therefore, 79, 34, 99, 56, 13 is a set of number which represent word "PHONE"

29. Answer: a

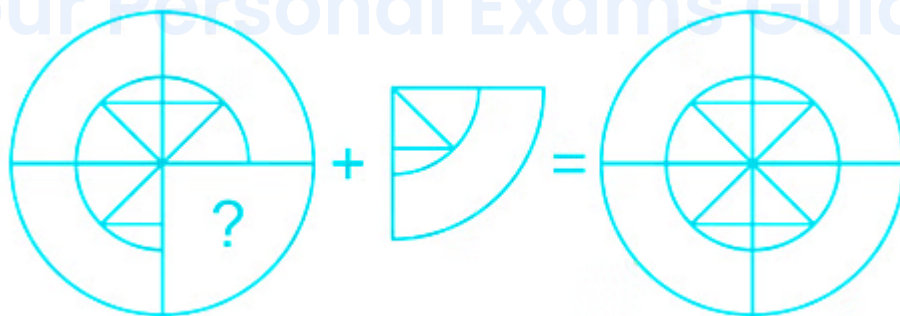
Explanation:



Above image shows that given question figure is hidden in figure of option 1).

30. Answer: b

Explanation:

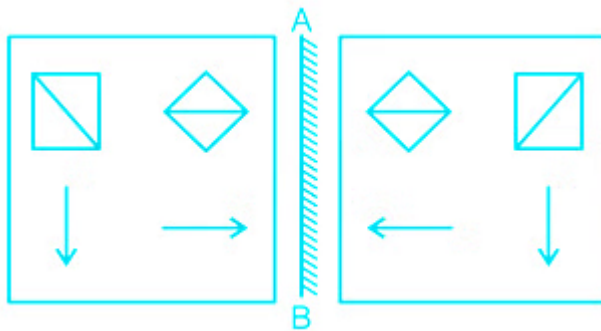


Above figure represent complete figure of incomplete figure question in question.

Hence, answer is option 2.

31. Answer: b

Explanation:

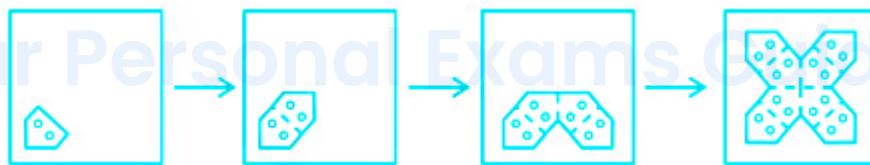


Above diagram shows mirror image of the question figure.

Hence, figure shown in option (2) is the correct answer.

32. Answer: a

Explanation:



When we unfold the punched sheet of paper then it will appear as shown in the above figure.

Therefore, the image of option 1) is the correct answer.

33. Answer: c

Explanation:

Upon interchanging:

1) 5 and 4  $\rightarrow 57 \times 3 \div 2 + 14 = 99.5$

2) 7 and 5  $\rightarrow 45 \times 3 \div 2 + 17 = 84.5$

3) 7 and 2  $\rightarrow 42 \times 3 \div 7 + 15 = \mathbf{33}$

4) 3 and 4  $\rightarrow 37 \times 4 \div 2 + 15 = 89$

By interchanging 7 and 5 the equation will be correct.

### 34. Answer: d

**Explanation:**

In  $4 * 7 * 6 = 698$

The pattern followed here is,

$4 + 2 = 6$

$7 + 2 = 9$

$6 + 2 = 8$

In  $3 * 5 * 0 = 572$

$3 + 2 = 5$

$5 + 2 = 7$

$0 + 2 = 2$

Similarly, then adding 2 to each number  $6 * 2 * 1$

$6 + 2 = 8$

$2 + 2 = 4$

$$1 + 2 = 3$$

Therefore, "843" is correct answer.

---

**35. Answer: a**

**Explanation:**

On arranging the given words according to the dictionary order, the following sequence can be obtained:

1. Onion
2. Onset
5. Opera
4. Overt
3. Oxide

Hence, '12543' represents correct sequence.

---

**36. Answer: a**

**Explanation:**

The series follows the odd number subtraction rule starting from 3.

$$67 - 3 = 64$$

$$64 - 5 = 59$$

$$59 - 7 = 52$$

$$52 - 9 = 43$$

The next odd number after 7 is 9. Thus, subtracting 9 from 52, we obtain 43.

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Therefore, 43 is the correct answer.

---

**37. Answer: a**

**Explanation:**

LOGIC: The pairs in the series are consecutive alphabets, and each pair has only 1 alphabet between them (as they appear in the English alphabetical series) .

Hence, answer is OP and not PQ as

→ LM – N – OP

→ LM – NO – PQ

The second series has two alphabets in between and thus OP correct answer.

---

**38. Answer: d**

**Explanation:**

Except Liver all other Lungs, Air pipe and Nose parts of the Respiratory system.

Therefore, Liver is odd one among given alternatives.

---

**39. Answer: c**

**Explanation:**

(1)  $11 - 1331 \rightarrow 11^3 = 1331$

(2)  $4 - 64 \rightarrow 4^3 = 64$

(3)  $5 - 25 \rightarrow 5^2 = 25$

$$(4) 7 - 343 \rightarrow 7^3 = 343$$

All options except 5 – 25 are cube roots

5 is the square root of 25 and not cube, hence the odd pair among the alternatives given in the question.

Hence, "5 – 25" is odd pair among given alternatives.

**40. Answer: d**

**Explanation:**

With reference to English alphabetical series,

1)  $W - 1$  and  $W + 1 = WVX$

2)  $Q - 1$  and  $Q + 1 = QPR$

3)  $K - 1$  and  $K + 1 = KJL$

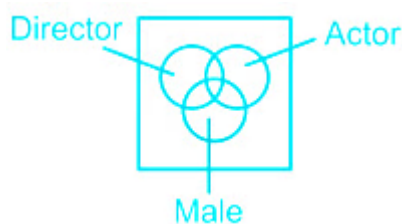
4)  $G - 1$  and  $G + 2 = GFI$

GFI is the odd as it doesn't conform to the pattern others are composed of.

**41. Answer: c**

**Explanation:**

Male can be Actor as well as Director.



Above diagram best express relationship between Actor, Director and Male.

Hence, answer is option 3.

---

**42. Answer: c**

**Explanation:**

As, Brewery is the place where wine is manufactured. Coin is made in Mint.

Thus, they are analogous.

---

**43. Answer: a**

**Explanation:**

In  $4 : 64$

$$4^3 = 64$$

Similarly,  $6^3 = 216$

Hence, 216 is correct answer.

---

**44. Answer: b**

**Explanation:**

In reference of English alphabet,

In  $BD : EH$

$$\rightarrow B + 3 = E$$

$$\rightarrow D + 4 = H$$

Similarly,

$$\rightarrow P + 3 = S$$

$$\rightarrow X + 4 = B$$

Hence, "SB" is correct option.

---

**45. Answer: c**

**Explanation:**

1) ROSE  $\rightarrow$  TRANSFORMED  $\rightarrow$  can be formed.

2) TRADE  $\rightarrow$  TRANSFORMED  $\rightarrow$  can be formed.

3) STRAP  $\rightarrow$  TRANSFORMED  $\rightarrow$  cannot be formed as there is no letter P.

4) SAND  $\rightarrow$  TRANSFORMED  $\rightarrow$  can be formed.

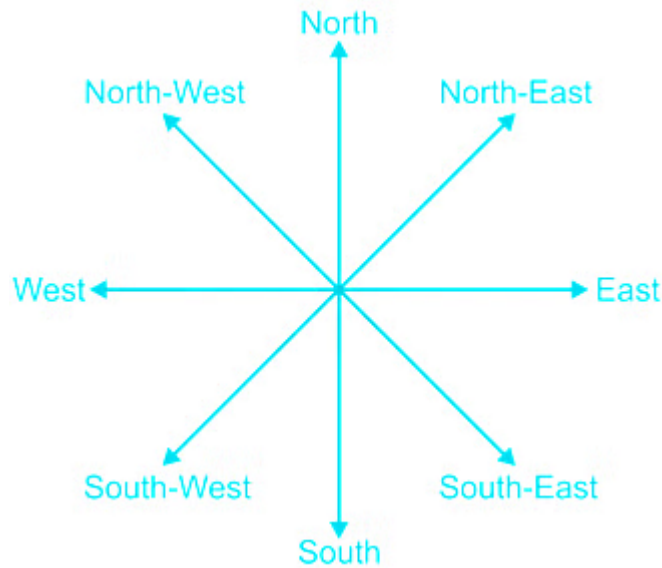
Hence, STRAP cannot be formed.

---

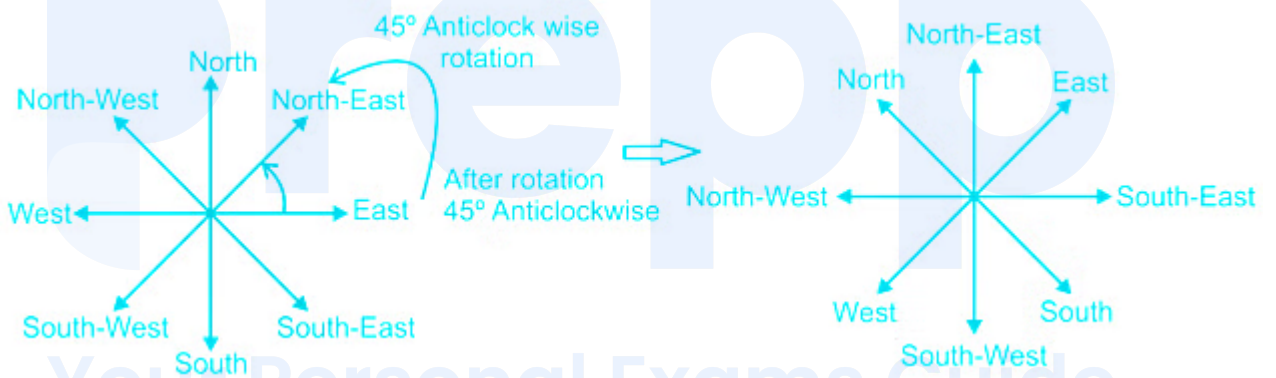
**46. Answer: b**

**Explanation:**





If North-East is called East, North is called North-East and North-West is called North.



Hence, Now south will be called as South – West.

47. Answer: a

Explanation:

According to the information given in the question, the following series can be obtained:

Arranging them in descending (tallest to shortest) order of height,

$$R > S > P > Q$$

Hence, Q is the shortest.

---

**48. Answer: d**

**Explanation:**

The least possible Venn diagram is:



**Conclusions:**

I. Some blue are green → False (it is possible but not definite)

II. Some blue are not green → False (it is possible but not definite)

Hence neither conclusion (I) nor conclusion (II) follows.

---

**49. Answer: a**

**Explanation:**

The words have been coded as follow,

$$G + 1 = H$$

$$O + 2 = Q$$

$$T + 3 = W$$

Similarly,

$$H + 1 = I$$

$$E + 2 = G$$

$$N + 3 = Q$$

Hence, in the code language "HEN" written as "IGQ".

---

**50. Answer: c**

**Explanation:**

The pattern followed here is,

$$S + U + N + 1 = 55 \quad (19 + 21 + 14 + 1)$$

$$R + A + T + 1 = 40 \quad (18 + 1 + 20 + 1)$$

Similarly,

$$G + U + N + 1 = 43 \quad (7 + 21 + 14 + 1)$$

Hence, In the code language "GUN" written as "43".

---

**51. Answer: a**

**Explanation:**

Let, two numbers are x and y

Sum of these two numbers is 7

$$x + y = 7 \quad \text{-----(1)}$$

The product of these two numbers is 12

$$xy = 12 \quad \text{-----(2)}$$

Divide equation (1) by xy

$$x/xy + y/xy = 7/xy$$

$$1/y + 1/x = 7/12$$

∴ Sum of their reciprocals is 7/12

**52. Answer: b**

**Explanation:**

Multiples of 5 from 1 to 200 can be represented as  $5n$ , where  $n$  is any natural numbers and  $1 \leq n \leq 40$

∴ Number of Multiples of 5 from 1 to 200 = 40

$5n$  will be a multiple of 4 if  $n$  is a multiple of 4

Now, multiples of 4 from 1 to 40 can be represented as  $4m$ , where  $m$  is any natural number and  $1 \leq m \leq 10$

∴ Number of multiples of 4 from 1 to 40 = 10

∴ Required number =  $40 - 10 = 30$

**53. Answer: c**

**Explanation:**

$$\sqrt{18 - 2\sqrt{77}}$$

$$\sqrt{(11 + 7 - 2 \times \sqrt{11} \times \sqrt{7})}$$

$$\sqrt{[(\sqrt{11})^2 + (\sqrt{7})^2 - 2 \times \sqrt{11} \times \sqrt{7}]}$$

$$\because a^2 + b^2 - 2ab = (a - b)^2$$

$$\sqrt{(\sqrt{11} - \sqrt{7})^2}$$

$$= \sqrt{11} - \sqrt{7}$$

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54. Answer: d

**Explanation:**

$$420 = 2 \times 3 \times 7 \times 2 \times 5$$

Prime factors of 420 are 2, 3, 5 and 7

$\therefore$  Number of prime factor = 4

---

55. Answer: b

**Explanation:**

A number will be divisible by 9 if the sum of the digits of the number is divisible by 9

Sum of digits of 234561 =  $2 + 3 + 4 + 5 + 6 + 1 = 21$ , Not Divisible by 9

$\therefore$  234561 is not divisible by 9

Sum of digits of 444123 =  $4 + 4 + 4 + 1 + 2 + 3 = 18$ , Divisible by 9

$\therefore$  444123 is divisible by 9

Sum of digits of 555231 =  $5 + 5 + 5 + 2 + 3 + 1 = 21$ , Not Divisible by 9

$\therefore$  555231 is not divisible by 9

Sum of digits of 65422 =  $6 + 5 + 4 + 2 + 2 = 19$ , Not Divisible by 9

$\therefore$  65422 is not divisible by 9

---

56. Answer: c

**Explanation:**

$$[(0.4)^3 + (0.6)^3] / [(0.4)^2 + (0.6)^2 - (0.4) \times (0.6)]$$

$$\therefore a^3 + b^3 = (a + b)(a^2 + b^2 - ab)$$

$$(0.4 + 0.6)[(0.4)^2 + (0.6)^2 - (0.4) \times (0.6)] / [(0.4)^2 + (0.6)^2 - (0.4) \times (0.6)]$$

$$= 0.4 + 0.6$$

$$= 1.0$$

**57. Answer: b**

**Explanation:**

A and B together can do a piece of work in 20 days

Part of work A and B can do in 1 day =  $1/20$

A alone can do the work in 30 days

Part of work A can do in 1 day =  $1/30$

$\therefore$  Part of work B alone can do in a day =  $1/20 - 1/30 = 1/60$

$\therefore$  B alone can do the work in 60 days

**58. Answer: b**

**Explanation:**

Given,

Part of cistern filled in 6 minutes =  $2/5$

Part of cistern filled in 1 minute =  $2/30 = 1/15$

$\therefore$  Total time required to fill the cistern = 15 minutes

Remaining part to be filled =  $1 - \frac{2}{5} = \frac{3}{5}$

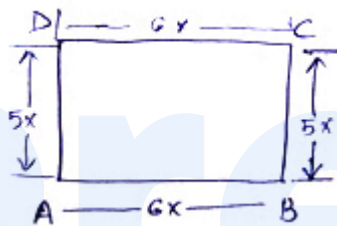
$\therefore$  Required time to fill the remaining part =  $15 - 6 = 9$  minutes

**59. Answer: b**

**Explanation:**

Perimeter of rectangle =  $2(\text{Length} + \text{Breadth})$

Let,



The length and breadth are  $6x$  and  $5x$  respectively

$\therefore$  Perimeter =  $2(6x + 5x)$

Given,

Perimeter =  $132$  m

$\therefore 2(6x + 5x) = 132$

$\Rightarrow 11x = 66$

$\Rightarrow x = 6$

$\therefore$  Breadth =  $5 \times 6$  m =  $30$  m

**60. Answer: a**

**Explanation:**

Let, marked price = Rs.  $x$

After two successive discounts of 30% and 40%

Selling price

$$= x \times \{1 - (30/100)\} \{1 - (40/100)\}$$

$$= x \times (0.70) \times (0.60)$$

$$= 0.42x$$

Given,

Selling price = Rs. 840

$$\therefore 0.42x = 840$$

$$\Rightarrow x = 840/0.42 = 2000$$

---

61. **Answer: d**

**Explanation:**

Short trick:

$$\text{Cost price} = 1050 \times 0.7/1.4 = \text{Rs. } 525$$

**Detailed solution:**

Marked price = Rs. 1050

Discount = 30%

$\therefore$  Selling price

$$= 1050 \times (1 - 0.30)$$

$$= 1050 \times 0.70 = 735$$



Given,

Profit percentage = 40%

We know,

Profit percentage =  $\left[\frac{\text{Selling Price} - \text{Cost Price}}{\text{Cost Price}}\right] \times 100$

$40 = \left[\frac{735 - \text{Cost Price}}{\text{Cost Price}}\right] \times 100$

$\Rightarrow 0.40 \times \text{Cost Price} = 735 - \text{Cost Price}$

$\Rightarrow 1.40 \times \text{Cost Price} = 735$

$\Rightarrow \text{Cost Price} = 525$

---

**62. Answer: a**

**Explanation:**

$\frac{2}{3}$  of P =  $\frac{6}{7}$  of Q

$2P/3 = 6Q/7$

$\Rightarrow 14P = 18Q$

$\Rightarrow P/Q = 18/14$

$\Rightarrow P/Q = 9/7$

$\Rightarrow P : Q = 9 : 7$

---

**63. Answer: a**

**Explanation:**

Given,

$$x/y = 3/5 \quad \text{-----(1)}$$

$$(5x + 2y)/(5x - y) = (5x/y + 2)/(5x/y - 1)$$

Putting value from equation (1)

$$= [5 \times (3/5) + 2]/[(5 \times (3/5) - 1)]$$

$$= (3 + 2)/(3 - 1)$$

$$= 5/2$$

---

**64. Answer: b**

**Explanation:**

Average of 15 numbers is 40

$$\therefore \text{Sum of these 15 numbers} = 15 \times 40 = 600$$

If two numbers 45 and 35 are removed

$$\text{Sum of remaining 13 numbers} = 600 - 45 - 35 = 520$$

$$\therefore \text{Average of these 13 numbers} = 520/13 = 40$$

---

**65. Answer: d**

**Explanation:**

Cost price = Rs. 1200

Selling Price = Rs. 1500

$$\therefore \text{Profit percentage} = [(Selling Price - Cost Price)/Cost Price] \times 100$$

$$= [(1500 - 1200)/1200] \times 100 = (300/12)\% = 25\%$$

**66. Answer: a**

**Explanation:**

Let,

Cost price = Rs.  $4x$

Selling Price = Rs.  $5x$

$\therefore$  Profit percentage =  $\left[\frac{\text{Selling Price} - \text{Cost Price}}{\text{Cost Price}}\right] \times 100$

$= \left[\frac{(5x - 4x)}{4x}\right] \times 100 = (100/4)\% = 25\%$

**67. Answer: b**

**Explanation:**

**GIVEN:**

Number of Boys = 360

Percentage of girls = 55%

**FORMULA USED:**

Percentage of boys =  $100 - \text{Percentage of girls}$

**CALCULATION:**

Let,

Total number of students =  $x$

$\therefore$  Percentage of Boys = 45%

$\therefore$  Number of boys =  $0.45x$

$\therefore 0.45x = 360$

$$\Rightarrow x = 360/0.45 = 800$$

Total number of students = 800

---

**68. Answer: a**

**Explanation:**

Let,

Price of 1 unit of the commodity = Rs.  $x$

If Price is decreased by 40%

Price of 1 unit of the commodity becomes = Rs.  $(1 - 0.40) x = \text{Rs. } 0.60x$

If consumption is increased by 30%,

1.30 numbers of units consumed in place of 1 unit

Price of 1.30 unit of the commodity becomes = Rs.  $(1.30 \times 0.60x) = \text{Rs. } 0.78x$

$$\therefore \text{Percentage decrease in expenditure} = [(x - 0.78x)/x] \times 100 = 0.22 \times 100\% = 22\%$$

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**69. Answer: b**

**Explanation:**

Let, Speed of the boat in still current =  $x$  km/h and Speed of the current =  $y$  km/h

Speed of boat along the current is 16 km/h

$$\therefore x + y = 16 \quad \text{-----(1)}$$

Speed of boat against the current is 10 km/h

$$\therefore x - y = 10 \quad \text{-----(2)}$$

$$(1) - (2)$$

$$x + y - x + y = 16 - 10$$

$$\Rightarrow 2y = 6$$

$$\Rightarrow y = 3 \text{ km/h}$$

---

**70. Answer: b**

**Explanation:**

Speed = Distance covered/Time required

To cross a pole, the train has to cover a distance equal to its length.

$\therefore$  Distance covered = 200 m

Time taken = 40 seconds

$\therefore$  Speed =  $200\text{m}/40\text{s} = (200/1000)/(40/3600) = 18 \text{ km/h}$

---

**71. Answer: c**

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**Explanation:**

Simple interest =  $(P \times r \times t)/100$

P = Principal

t = Time period

r = Rate of interest

Given,

t = 5 years

Let,

Principal = P

Rate of interest = r

Simple interest =  $(P \times r \times 5)/100 = Pr/20$

After, increasing interest rate by 2% keeping amount of Principal and time fixed

Simple interest =  $[P \times (r + 2) \times 5]/100 = P(r + 2)/20$

According to the question,

$$(Pr + 2P - Pr)/20 = 190$$

$$\Rightarrow 2P = 20 \times 190$$

$$\Rightarrow P = 1900$$

---

**72. Answer: d**

**Explanation:**

Total sale of company A from years 2010 to 2015 =  $150 + 120 + 360 + 400 + 450 + 400$   
= 1880

$\therefore$  Average sale =  $1880/6$  crores = 313.33 crores

---

**73. Answer: b**

**Explanation:**

From the bar graph,

Only in the years 2010 and 2014 sale of company A is greater than that of B.

$\therefore$  In 2 years the sale of company A is greater than that of company B.

74. Answer: c

**Explanation:**

Sale of company B in 2011 = 150 crores

Sale of company B in 2012 = 375 crores

Change in sale of company B from year 2011 to 2012 = 375 - 150

= 225 crores

∴ The required percentage =  $(225/150) \times 100 = 150\%$

---

75. Answer: d

**Explanation:**

Sale of company A in 2012 = 360 crores

Sale of company B in 2015 = 500 crores

∴ The required difference = 500 crores - 360 crores = 140 crores

---

76. Answer: c

**Explanation:**

Per capita income or average income measures the average income earned per person in a given area (city, region, country, etc.) in a specified year.

---

77. Answer: c

**Explanation:**

A cheque is a document that orders a bank to pay a specific amount of money from a person's account to the person in whose name the cheque has been issued.

---

**78. Answer: c****Explanation:**

The Eighth Schedule to the Constitution of India lists the official languages of the Republic of India.

---

**79. Answer: d****Explanation:**

Democracy, in modern usage, is a system of government in which the citizens exercise power directly or elect representatives from among themselves to form a governing body, such as a parliament.

---

**80. Answer: a****Explanation:**

The Mahalwari system of land revenue was introduced by Holt Mackenzie and Robert Merttins Bird.

---

**81. Answer: c**



**Explanation:**

Faujdar was a title awarded by Muslim rulers to people who had responsibility of protecting some territory.

Sadar is a title of nobility that was originally used to denote princes, noblemen, and other aristocrats. Kotwal is an Indian police officer.

---

**82. Answer: d**

**Explanation:**

The 66th parallel south is a circle of latitude that is 66 degrees south of the Earth's equatorial plane, about 61 km north of the Antarctic Circle.

---

**83. Answer: d**

**Explanation:**

Continental crust is thicker, 22 miles (35 km) on average and less dense than oceanic crust, which accounts for its mean surface elevation of about 3 miles (4.8km) above that of the ocean floor.

---

**84. Answer: c**

**Explanation:**

A stimulus (plural stimuli) is a detectable change in the internal or external environment that makes us respond to them.

---

85. Answer: a

**Explanation:**

The correct answer is Storage.

- The original function of the vertebrate stomach was **storage** .
- The acidic medium in the stomach also breaks down the food.

★ Additional Information

- Stomach
  - The stomach is a part of the alimentary canal where food is stored for a while after passing through the food pipe.
  - It is a J-shaped sac-like structure .
  - Mucous, hydrochloric acid, and digestive juices are secreted by the inner linings of the stomach.
  - Hydrochloric acid provides an acidic medium that kills bacteria that comes along with food.
  - The digestive enzymes secreted in the stomach break protein into simple substances.

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86. Answer: c

**Explanation:**

Xerophthalmia is a medical condition in which the eye fails to produce tears. It may be caused by vitamin A deficiency.

---

87. Answer: a

**Explanation:**

The correct answer is option 1 i.e Time Period

- The time taken by pendulum to complete one oscillation is known as the time period.
- It is denoted by T and its SI unit is second.
- A time period (denoted by 'T' ) is the time taken for one complete cycle of vibration to pass a given point. As the frequency of a wave increases, the time period of the wave decreases.
- Time period (T) of a pendulum is the time taken by the pendulum to complete one oscillation and it is given by

$$T = 2\pi\sqrt{\frac{l}{g}}$$

where l is the length of the pendulum and g is the acceleration due to gravity.

- Frequency ( $\nu$ ): The number of waves that pass a given point per second is called frequency.
  - The unit of frequency is vibration per second or Hertz.
- Time period (T) : The time taken to complete one full oscillation or cycle by the Wave is called time period.
  - The SI unit of the time period is second (s).

The relationship between time period and frequency is given as:

$$\text{Time period (T)} = 1/\nu$$

---

**88. Answer: b**

**Explanation:**

When a current passes through a wire, a part of the electrical energy is converted into heat energy as a result of some resistance experienced by it and as a result the wire gets heated. This is known as heating effect of electric current.

---

89. Answer: b

**Explanation:**

The file in the Recycle bin gets removed permanently when it is deleted manually.

---

90. Answer: c

**Explanation:**

The chemical formula for the metal chloride will be  $MCl_2$ . This is because from the formula  $MSO_4$ , we come to know that the valency of the metal M will be 2 as the valency of  $SO_4$  is 2.

---

91. Answer: b

**Explanation:**

Concept:

- A periodic table is an arrangement of elements based on their atomic numbers and chemical properties .
- It is divided into 18 groups and 7 periods running vertically and horizontally respectively.
- The periodic table accommodates a discrete combination of metal, non-metals, and metalloids .
- The elements in the periodic table are arranged horizontally in ascending order of their atomic numbers known as periods.
- Vertically the elements having identical chemical properties are clubbed together known as groups.
- The 18 groups are also known as columns and the 7 periods are also known as the rows .

|          |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Group →  | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |    |
| Period ↓ |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 1        | H  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | He |
| 2        | Li | Be |    |    |    |    |    |    |    |    |    |    | B  | C  | N  | O  | F  |    | Ne |
| 3        | Na | Mg |    |    |    |    |    |    |    |    |    |    | Al | Si | P  | S  | Cl |    | Ar |
| 4        | K  | Ca | Sc | Ti | V  | Cr | Mn | Fe | Co | Ni | Cu | Zn | Ga | Ge | As | Se | Br |    | Kr |
| 5        | Rb | Sr | Y  | Zr | Nb | Mo | Tc | Ru | Rh | Pd | Ag | Cd | In | Sn | Sb | Te | I  |    | Xe |
| 6        | Cs | Ba | La | Hf | Ta | W  | Re | Os | Ir | Pt | Au | Hg | Tl | Pb | Bi | Po | At |    | Rn |
| 7        | Fr | Ra | Ac | Rf | Db | Sg | Bh | Hs | Mt | Ds | Rg | Cn | Nh | Fl | Mc | Lv | Ts |    | Og |

|             |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Lanthanides | La | Ce | Pr | Nd | Pm | Sm | Eu | Gd | Tb | Dy | Ho | Er | Tm | Yb |
| Actinides   | Ac | Th | Pa | U  | Np | Pu | Am | Cm | Bk | Cf | Es | Fm | Md | No |

Explanation:

Periods:

- Elements are arranged in increasing atomic number of the elements in a period.
- One extra electron gets added to the outermost shell as we move along the periods from left to right.
- The electron gets added to the same shell or orbit and thus the electrons present for bonding increase by one unit.
- Thus, the shell number remains the same but the number of electrons present for bonding increases along a period.

Groups:

- Elements having the same number of outer electrons are put in the same group of the periodic table.
- When we move down a group, one extra shell gets added to the elements.
- The outermost shell has electrons present for bonding.
- Though the number of shells increases as we go down in a group, yet the number of electrons in the outermost shell remains the same.

- For example, the Halogens F, Cl, Br, I, At all belong to group 17 and have 7 electrons in the outermost shell.
- Similarly, Group 16 elements have 6 electrons in the outermost shell, group 15 has 5 electrons in the outermost shell, and so on.

| Group number | Common name           | Number of electrons for bonding |
|--------------|-----------------------|---------------------------------|
| 1            | Alkali metals         | 1                               |
| 2            | Alkaline earth metals | 2                               |
| 14           | Crystallogens         | 4                               |
| 15           | Pnictogens            | 5                               |
| 16           | Chalcogens            | 6                               |
| 17           | Halogens              | 7                               |
| 18           | Noble gases           | 8                               |

Hence, group 17 is called halogens.

92. Answer: d

**Explanation:**

An autotroph or producer is an organism that produces complex organic compounds from simple substances present in its surroundings, generally using energy from light (photosynthesis) or inorganic chemical reactions (chemosynthesis).

93. Answer: c

**Explanation:**

RUSA aims to provide equal development to all higher institutions and rectify weaknesses in the higher education system.

---

94. Answer: a

**Explanation:**

The first laser was built in 1960 by Theodore H. Maiman.

---

95. Answer: c

**Explanation:**

The correct answer is Buddhism.

★ Key Points

- Mahayana :
    - The term **Mahayana is a Sanskrit word** that literally means "Great Vehicle".
    - It believes in the heavenliness of Buddha and Idol worship of Buddha and Bodhisattvas embodying Buddha Nature.
    - Buddhist schools embedded in China, Korea, Tibet, and Japan belong to the Mahayana tradition.
    - Shunyavada philosophy is associated with Mahayana Buddhism.
- 

96. Answer: b

**Explanation:**

Tata Steel Ltd. (TISCO) has won the Prime Minister's trophy for 'Best Performing Integrated Steel Plant' in India during 2014-2015 and 2015- 16.

97. Answer: d

**Explanation:**

The Story of My Experiments with Truth is the autobiography of Mohandas K. Gandhi, covering his life from early childhood through to 1921.

---

98. Answer: d

**Explanation:**

The Missile Technology Control Regime (MTCR) was established in April 1987 by the G7 countries: Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States of America.

---

99. Answer: a

**Explanation:**

The Economic and Technology Co-operation Agreement (ETCA) is a proposed diplomatic arrangement that seeks to add to the existing free trade agreement between the Republic of India and the Republic of Sri Lanka, primarily in relation to trade-in services and the service sector.

---

100. Answer: c

**Explanation:**

- Bhaichung Bhutia was the first Indian to play for any international football club.



- When he joined English club Bury in 1999, he became the first Indian footballer to sign a contract with a European club.

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